Index of Claims



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Application No.

Robert D. Harlan

10/623,045

Examiner

Date

Applicant(s)

SMILLIE, BENJAMIN ANDREW

1713

Art Unit

Rejected Allowed

(Through numeral) Cancelled

Claim

Restricted

Non-Elected N

Interference

**Appeal** Α

0 Objected

|                  |                                 |  |               |                |          |  | J  |  | _  |          |  |  |
|------------------|---------------------------------|--|---------------|----------------|----------|--|--|--|--|----------|--|--|
| Cla              | aim                             | Date   |               |                |          |  |  |  |  |          |  |  |
| -0"              |                                 |  | Γ             | Г              | г.       | <u> </u>   | Ĭ  | Ι                                      |  | Г        |  |  |
| <u>m</u>         | Original                        | 2/23/04  |               |                |          |  | 1  |  |  |          |  |  |
| Final            | [j.                             | 23   |               |                |          |  |  |  |  | Ì        |  |  |
| 4_               | Ō                               | 2  |               |                |          |  |  |  |  |          |  |  |
| 1                | 1                               | =  |               |                | -        |  | _  | _                                      | <u> </u>   | -        |  |  |
| 1                | -                               | =  |               |                | $\vdash$ | ├  |  | _                                      | -  | -        |  |  |
| -2               | 2                               | =  | _             | -              | _        | <u> </u>   | _  | _                                      | -  | -        |  |  |
| 2<br>3<br>4<br>5 | 1<br>2<br>3<br>4<br>5<br>6<br>7 | =  | _             | _              | -        | -  |  |  | <del> </del>                                     | $\vdash$ |  |  |
| 5                | 5                               | =  | _             |                |          | -  |  |  | -  |          |  |  |
| J.               | =                               | -  |               |                |          | -  |  | -                                      |  | -        |  |  |
|                  |                                 | -  | -             | -              | 22       | -  |  |  | -  |          |  |  |
|                  | 8                               | $\vdash$   | <del> </del>  | -              |          | $\vdash$   | ├  |  |  | -        |  |  |
| $\vdash$         | 9                               | $\vdash$   | <u> </u>      | _              | $\vdash$ | $\vdash$   | $\vdash$   | _                                      | ⊢  | $\vdash$ |  |  |
| -                | 10                              |  | -             | <del> </del>   |          |  | -  | <u> </u>                               | <del> </del>                                     | -        |  |  |
| -                | 10                              | <del>  _</del>                                   | <u> </u>      | -              |          | _  | _  |  | -  |          |  |  |
| 6                | 11                              | =  | <u> </u>      | $\vdash$       | <u> </u> | <u> </u>   | <u> </u>   | -                                      | <del> </del>                                     | H        |  |  |
| 8                | 12<br>13<br>14                  | =  | ├             |                |          |  |  | -                                      | <del>                                     </del> | -        |  |  |
| 9                | 13                              | $\vdash$   | ├—            | <u> </u>       | -        | -  | -  |  | -  | H        |  |  |
| 10               | 15                              | =  | $\vdash$      | <u> </u>       | <u> </u> | <del> </del>                                     | <u> </u>   | -                                      | _  | H        |  |  |
| 10               | 15<br>16                        | =  |               | <del> </del>   | -        |  |  |  |  | -        |  |  |
|                  | 17                              |  |               | <del> </del> - |          | ├  | -  | <u> </u>                               | <del> </del>                                     |          |  |  |
|                  | 10                              |  | _             | _              | <u> </u> | <u> </u>   | _  |  |  |          |  |  |
|                  | 18<br>19                        |  |               |                | -        |  |  | _                                      | _  |          |  |  |
|                  | 20                              |  |               |                |          |  |  |  |  | H        |  |  |
| -                | 20                              |  |               |                | _        |  |  |  |  |          |  |  |
|                  | 21<br>22                        | -  |               |                |          |  | <u> </u>   |  | _  |          |  |  |
| -                | 22                              | -  | -             |                | -        | -  | -  | -                                      |  | -        |  |  |
| <u> </u>         | 23<br>24                        |  | -             |                | -        |  |  |  |  |          |  |  |
|                  | 25                              | -  |               | -              |          |  |  | -                                      | _  | -        |  |  |
|                  | 26                              | -  | -             | <b>-</b>       | -        | -  | -  | $\vdash$                               | -  |          |  |  |
|                  | 26<br>27                        |  |               |                | -        |  | -  |  |  | _        |  |  |
|                  | 28                              |  | $\vdash$      |                | <u> </u> |  |  |  |  |          |  |  |
|                  | 29                              | -  | -             |                |          |  | $\vdash$   | $\vdash$                               |  |          |  |  |
|                  | 30                              |  | -             | -              |          |  | -  | -                                      |  |          |  |  |
|                  | 31                              | -  | <u> </u>      | _              |          | <del>                                     </del> | $\vdash$   |  |  |          |  |  |
|                  | 32                              |  | $\vdash$      | -              | <u> </u> | _  | -  |  | _  |          |  |  |
|                  | 33                              | <b> </b>   | <u> </u>      |                | <u> </u> | <u> </u>   |  | _                                      | <u> </u>   |          |  |  |
|                  | 34                              | <del>                                     </del> |               |                | <b>-</b> |  | <del>                                     </del> |  |  | Н        |  |  |
|                  | 35                              |  |               | $\vdash$       |          |  |  |  |  |          |  |  |
|                  | 36                              |  |               |                | T -      | T  |  |  |  | М        |  |  |
|                  | 37                              |  | Γ-            | Γ              |          |  | T  |  |  | П        |  |  |
|                  | 38                              |  | $\overline{}$ | Г              |          |  |  |  |  | П        |  |  |
|                  | 39                              |  |               |                |          |  |  |  |  |          |  |  |
|                  | 40                              |  |               |                |          |  |  |  |  |          |  |  |
|                  | 41                              |  | L             | $\Box$         |          |  |  |  |  |          |  |  |
|                  | 42                              |  |               |                |          |  |  |  |  |          |  |  |
|                  | 43                              |  |               |                |          |  |  |  |  |          |  |  |
|                  | 44                              |  |               |                |          |  |  |  |  |          |  |  |
|                  | 45                              |  |               |                |          |  |  |  |  |          |  |  |
| <u></u>          | 46                              |  | L             | L              |          |  | L  |  |  |          |  |  |
|                  | 47                              | L.   |               |                |          | L  |  | ــــــــــــــــــــــــــــــــــــــ |  |          |  |  |
|                  | 48                              |  | Ш             |                |          |  |  |  |  |          |  |  |
| L                | 49                              | L  |               |                |          |  |  |  |  |          |  |  |
|                  | 50                              |  |               |                |          |  |  |  |  |          |  |  |

| ula         | um       | Date     |   |   |    | {        | Claim    |           |                | Date     |      |       |          |          |          |          |   |          |          |          |                 |           |
|-------------|----------|----------|---|---|----|----------|----------|-----------|----------------|----------|------|-------|----------|----------|----------|----------|---|----------|----------|----------|-----------------|-----------|
| <u> </u>    | Original | 2/23/04  |   |   |    | :        |          |           |                |          |      | Final | Original |          |          |          |   |          |          |          |                 |           |
| П           | 1        | =        |   |   |    | _        |          |           |                |          |      |       | 51       |          |          |          |   |          |          | _        |                 |           |
| 5           | 2        | =        |   |   |    | _        | _        |           |                |          |      |       | 52       | <u> </u> | $\neg$   |          |   | $\vdash$ |          |          |                 |           |
| 2<br>3<br>1 | 3        | =        | _ | _ | _  | _        | _        | _         | _              | _        |      |       | 53       | _        |          | _        |   | _        | _        | _        |                 | _         |
|             | 4        | =        | _ | _ |    |          | -        |           | -              |          | 1    |       | 54       | -        | -        |          |   | -        | $\vdash$ |          | $\vdash$        |           |
| $\vdash$    | 5        | =        |   |   |    |          |          |           |                | -        |      |       | 55       |          | $\dashv$ |          |   | -        |          |          | H               |           |
|             | 6        | _        |   |   |    |          | -        |           |                |          |      |       | 56       | _        | $\dashv$ |          | - |          |          | _        |                 | _         |
|             | 7        | _        |   |   | 77 | -        |          |           | <del> </del> — |          |      |       | 50       | -        |          | -1-      | - |          |          | _        | -               |           |
| -           | -/       |          |   |   |    | H        | <u> </u> |           |                | _        |      |       | 57       |          |          |          |   |          |          |          | $\vdash$        |           |
| $\dashv$    | 8        | _        | _ | _ | _  | _        | ⊢        | _         | <u> </u>       | _        |      |       | 58       | _        | $\dashv$ |          |   | _        |          |          | H               |           |
| -           | 9        | _        |   | _ |    | L        | <u> </u> |           | <u> </u>       | _        |      |       | .59      |          | -        |          |   | _        |          |          | Н               |           |
| -           | 10       | _        |   |   |    | _        | _        | -         | _              |          |      |       | 60       |          | $\vdash$ |          |   |          |          | -        | Н               |           |
| 3           | 11       | =        |   | _ |    | _        | <u> </u> |           | _              |          |      |       | 61       | _        | _        |          |   | _        | _        | _        | $\vdash$        | $\Box$    |
|             | 12       | =        |   |   |    |          |          | _         | _              |          |      |       | 62<br>63 |          | _        |          |   |          |          |          | $\square$       |           |
| 3           | 13       | =        |   |   |    |          | _        |           |                |          |      |       | 63       |          |          |          |   |          |          | _        | Ш               |           |
| 0           | 14       | Ξ        |   |   |    |          |          |           |                |          |      |       | 64       |          |          |          |   | _        |          |          |                 |           |
| 의           | 15       | =        |   |   |    |          |          |           |                |          |      |       | 65       |          |          |          |   |          |          |          | Ш               |           |
| _           | 16       |          |   |   |    |          | _        |           |                |          |      |       | 66       |          |          |          |   |          |          |          |                 |           |
|             | 17       |          |   |   |    |          |          |           |                |          |      |       | 67       |          |          |          |   |          |          |          | Ш               |           |
|             | 18       |          |   |   |    |          |          |           |                |          |      |       | 68       |          |          |          |   |          |          |          | Ш               |           |
|             | 19       |          |   |   |    |          |          |           |                |          | ll   |       | 69       |          | 1        |          |   |          |          |          |                 |           |
|             | 20       |          |   |   |    |          |          |           | l              |          |      |       | 70       |          |          |          |   |          |          |          |                 |           |
|             | 21       |          |   |   |    |          |          |           |                |          |      |       | 71       |          |          |          |   |          |          |          |                 |           |
|             | 22       |          |   |   |    |          |          |           |                |          |      |       | 72       |          |          |          |   |          |          |          |                 |           |
|             | 23       |          |   |   |    |          |          |           |                |          | l    |       | 73       |          |          |          |   |          |          |          |                 |           |
|             | 24       |          |   |   |    |          |          |           |                |          | l l  |       | 74       |          |          |          |   |          |          |          | П               |           |
| $\neg$      | 25       |          |   |   |    |          |          |           |                |          | 1    |       | 75       |          |          |          |   |          |          |          |                 |           |
|             | 26<br>27 |          |   |   |    |          |          |           |                |          | 1    |       | 76       |          |          |          |   |          |          |          |                 |           |
|             | 27       |          |   |   |    |          |          |           |                |          | ۱. ا |       | 77       |          |          |          |   |          |          |          | П               |           |
| $\neg$      | 28       |          |   |   |    |          |          |           |                |          | 1    |       | 78       |          | _        |          |   |          |          |          | П               | П         |
| $\neg$      | 28<br>29 |          |   |   |    |          |          |           |                |          | 1    |       | 79       |          |          |          |   |          |          |          |                 | $\Box$    |
| $\neg$      | 30       |          | - |   |    |          |          |           |                |          |      |       | 80       |          |          |          |   |          |          |          | П               | $\exists$ |
| $\dashv$    | 31       |          |   |   |    |          |          |           |                |          |      |       | 81       |          |          | _        |   |          |          |          | Н               | $\vdash$  |
| $\dashv$    | 32       |          | - |   |    | _        | -        | $\vdash$  |                |          | l    |       | 81<br>82 | Н        |          | —        |   | Ė        |          |          | Н               | $\dashv$  |
| $\dashv$    | 33       |          |   |   |    |          |          |           |                |          | l    |       | 83       |          |          | _        |   | _        |          |          | Н               | $\dashv$  |
| $\dashv$    | 34       |          |   |   |    | _        | -        | _         |                |          | ll   |       | 84       |          |          | _        |   | -        |          | -        | $\vdash$        | $\dashv$  |
| $\neg$      | 35       |          |   | _ |    |          |          | _         |                |          |      |       | 85       |          |          |          |   | _        |          |          |                 | $\dashv$  |
| $\neg$      | 36       |          |   | _ | -  | -        |          |           |                |          |      |       | 86       | Н        |          |          |   |          |          |          | Н               | $\dashv$  |
|             | 37       |          |   |   | _  |          | -        |           |                | $\vdash$ |      | _     | 87       | H        | -        |          |   | _        | _        | _        | $\vdash$        | $\dashv$  |
| -           | 38       |          | _ |   |    | _        |          |           | -              | $\vdash$ |      |       | 88       | -        |          | _        |   | _        | Ĭ        |          | Н               | $\dashv$  |
| -           | 30       |          |   |   |    |          | <u> </u> |           | -              | -        |      |       | 90       | -        |          | -        |   | -        |          | _        | $\vdash$        | $\dashv$  |
| $\dashv$    | 39<br>40 |          |   |   |    |          |          |           | -i             | -        |      |       | 89       | H        | -        | -        | _ | _        |          | _        | Н               | $\dashv$  |
|             | 40       | _        |   |   |    | _        |          | -         |                | -        |      |       | 90       | -        | -        |          |   | -        |          |          | Н               | $\dashv$  |
| $\dashv$    | 41<br>42 |          |   |   |    |          |          | _         | _              | $\vdash$ |      |       | 91       | Н        |          | _        |   |          |          |          | $\vdash$        | $\dashv$  |
|             | 42       |          |   |   |    |          |          |           | _              | <u> </u> |      |       | 92       |          |          |          | _ |          |          |          |                 |           |
|             | 43       |          |   |   |    |          | -        |           |                | _        |      |       | 93       |          | $\dashv$ | _        |   |          |          |          | $\vdash$        | -         |
|             | 44       | $\vdash$ |   |   |    |          |          |           | <b></b>        | ļ        |      |       | 94<br>95 |          |          |          |   |          |          | $\vdash$ | $\vdash \vdash$ | $\dashv$  |
| -           | 45       | $\vdash$ | _ |   | -  | $\vdash$ | $\vdash$ |           | ļ.,            | -        |      |       |          | $\vdash$ | $\dashv$ | $\dashv$ | - |          |          | _        |                 |           |
| 4           | 46       | _        |   |   | _  | _        |          |           |                |          |      |       | 96       | $\vdash$ | -        |          | _ | _        | _        | _        | -               | $\dashv$  |
| 4           | 47       |          |   |   |    |          | _        |           |                | _        |      |       | 97       | Ш        | _        |          |   |          |          |          |                 |           |
| _           | 48       | _        | _ |   |    |          | <u> </u> | $\square$ |                | <u> </u> |      |       | 98       | $\sqcup$ | _        |          |   |          | _        |          | $\square$       |           |
|             | 49       |          |   | _ | _  | Ш        |          |           |                | <u> </u> |      |       | 99       | $\sqcup$ |          | _        | _ |          | _        |          | $\square$       | _         |
| _1          | 50       |          |   |   |    |          | لسا      |           |                | L        | ı l  |       | 100      |          |          |          |   |          |          | لــــا   | $\Box$          |           |
|             |          |          |   |   |    |          |          |           |                |          |      |       |          |          |          |          |   |          |          |          |                 |           |

|     | Cli   | Date       |          |          |  |              |          |              |              |              |              |
|-----|-------|------------|----------|----------|--|--------------|----------|--------------|--------------|--------------|--------------|
|     | Final | Original   |          |          |  |              |          |              |              |              |              |
| 1   |       | 101        | ├─       | $\vdash$ | -  | <del> </del> | $\vdash$ | ┢            | -            | -            | -            |
| 1   |       | 102        |          |          |  | $\vdash$     |          |              | $\vdash$     |              |              |
| 1   |       | 102<br>103 |          | $\vdash$ |  |              | _        |              | $\vdash$     |              |              |
|     |       | 104        |          |          |  |              |          |              |              |              |              |
|     |       | 104<br>105 |          |          |  |              |          |              |              |              |              |
|     |       | 106        |          |          |  |              |          |              |              |              |              |
|     |       | 107        |          |          |  |              |          |              |              |              |              |
|     |       | 108        |          |          |  |              |          |              |              |              |              |
|     |       | 109        |          |          |  | Ĺ            |          |              |              |              |              |
| ] . |       | 110        |          |          |  |              |          |              |              |              |              |
| 4   |       | 111        | _        | _        |  | L_           |          | _            |              | L            | _            |
| 1   |       | 112        |          | L        |  | L_           |          |              | <u> </u>     | <u> </u>     | _            |
| 1   |       | 113        | <u> </u> | <u> </u> | <u> </u>   | <u> </u>     |          | <u> </u>     | ļ            | <u> </u>     | _            |
| 1   |       | 114        | L        | <u> </u> |  | L_           |          |              | <u> </u>     | L            | _            |
| 4   |       | 115        | _        | _        |  | _            |          |              | _            | L.           |              |
| -   |       | 116        | <u> </u> |          |  |              |          |              |              | _            | _            |
|     |       | 117        | <u> </u> |          |  |              |          |              |              | ļ            |              |
|     |       | 118        | <u> </u> | <u> </u> | _  | _            |          | ļ.—          | <del> </del> | <u> </u>     | _            |
| -   |       | 119        | <u> </u> | _        |  | -            |          | <u> </u>     | _            | _            | <u> </u>     |
| -   |       | 120        | _        | <u> </u> |  | _            | _        |              | ┡            | ļ            | _            |
| -   |       | 121<br>122 | -        | _        |  | _            |          | <u> </u>     | <u> </u>     | _            | <u> </u>     |
| -   |       | 122        | <u> </u> | ├        | _  | -            | _        |              | _            | <u> </u>     | <del> </del> |
| -   |       | 123<br>124 | _        | -        |  |              | _        | _            | _            | _            | _            |
| -   |       | 124        | _        | -        | _  |              | _        | -            | -            | -            | -            |
| -   |       | 125        |          | -        | -  |              |          |              | -            | _            | _            |
| 1   |       | 126<br>127 | _        | ⊢        | $\vdash$   |              |          | <del> </del> | _            | $\vdash$     | ┝            |
| 1   |       | 128        |          | $\vdash$ | -  |              |          |              | $\vdash$     | $\vdash$     | H            |
| -   |       | 129        |          | -        | -  |              | _        | <del> </del> | ├            | ┝            | -            |
| -   |       | 130        |          |          | <del> </del>                                     |              |          | ├            | <del> </del> | <del> </del> | -            |
| 1   |       | 131        |          | -        | <del> </del>                                     |              |          |              |              | -            |              |
| ┨   |       | 132        |          | -        | ├  |              |          | -            | -            | -            |              |
| 1   |       | 133        |          |          |  |              |          |              |              | H            |              |
|     |       | 134        | -        | -        | $\vdash$   | -            |          | -            |              | $\vdash$     | -            |
| 1   |       | 135        | -        |          | <del>                                     </del> | 1            | $\vdash$ | -            |              | -            |              |
| 1   |       | 136        |          | <u> </u> | <u> </u>   | -            |          | -            |              |              |              |
| 1   |       | 137        | _        | -        | H  |              |          | _            | -            | _            | Г            |
| 1   |       | 137<br>138 | П        | $\vdash$ | Г  |              |          |              | $\vdash$     |              |              |
| 1   |       | 139        | П        |          | $\vdash$   |              |          |              |              |              |              |
| 1   |       | 140        |          | Г        |  |              | П        |              |              |              | Т            |
| 1   |       | 141        |          |          |  |              |          |              |              |              |              |
| ]   |       | 142        |          |          |  |              |          |              |              |              |              |
| ]   |       | 143        |          |          |  |              |          |              |              |              |              |
|     |       | 144        |          |          |  |              |          |              |              |              |              |
| ]   |       | 145        |          |          |  |              |          |              |              |              |              |
|     |       | 146        |          |          |  |              |          |              |              |              |              |
|     |       | 147        |          |          |  |              |          |              |              |              |              |
|     |       | 148        |          |          |  |              |          |              |              |              |              |
|     |       | 149        |          |          |  |              |          |              |              |              |              |
|     |       | 150        |          |          |  |              |          |              |              |              |              |